

Windows DNA Building Tomorrow's Applications Today

**Tod Nielsen
Vice President
Developer Division
Microsoft Corporation**

A space shuttle is shown launching vertically on the right side of the image, with a large plume of fire and smoke at its base. The background is a clear blue sky. In the top right corner, there are several small icons representing documents or spreadsheets, some of which are connected by lines, suggesting a network or data flow.

POWER

Windows DNA 2000

Readiness Conference

/// featuring SQL Server 2000

Top 10 Lists I Considered For Today's Top 10 List

- 6. Top 10 World Records that
Tod has been involved with**
- 7. Top 10 Easter Eggs you
know are there, but can't find**
- 8. Top 10 ads we considered
running to deal with the crud
flowing from Redwood Shores**
- 9. Top 10 Reasons Y2K was a
yawner**
- 10. Top 10 sleepless nights for the
SQL Development team**

My other World Record...



Top 10 Lists I Considered For Today's Top 10 List

- 1. Top 10 Support Complaints we didn't understand**
- 2. Top 10 hosts we considered for the Windows 2000 Launch event**
- 3. Top 10 demo fiascos we lived to tell about**
- 4. Top 10 things you have sent us a lot of mail about**
- 5. Top 10 ways to mess with the product test organization**

Developers: Key To Microsoft

PC Hardware

**OS abstraction
(Windows)**

**Graphical
User
Interface
Object-**

**Rapid development
(VB)**

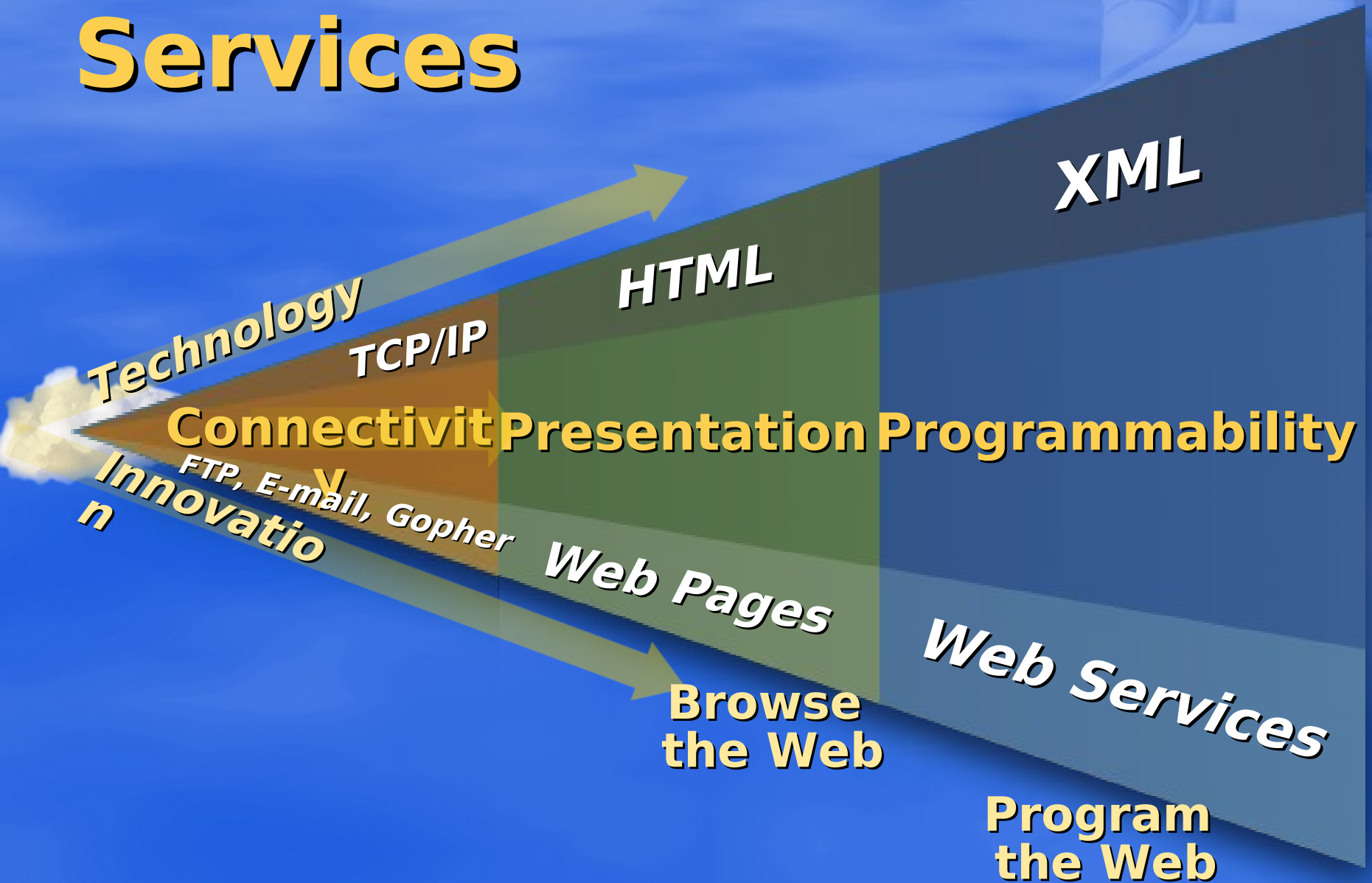
**oriented
Programmin
g**

Components (COM)

The Internet

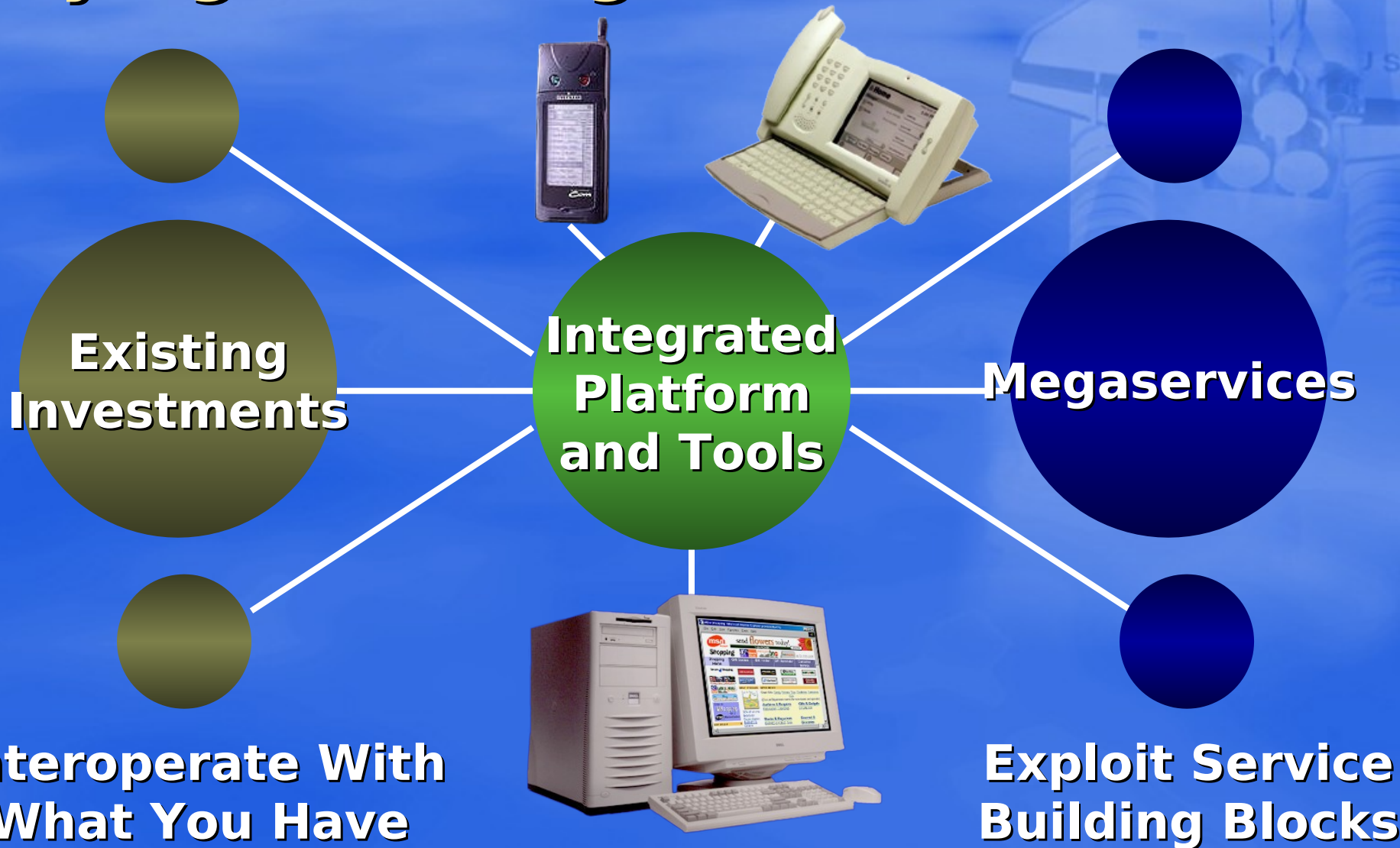
Today's Focus

Evolution To Web Services



Programming The Web

Tying It All Together



Web Services Demonstration



Web Services Examples

**Consumer:
Financial
Mgmt.**

Integrate bank,
broker, insurance Web
services

**Devices:
Automobile**

Navigation,
entertainment,
security, maintenance

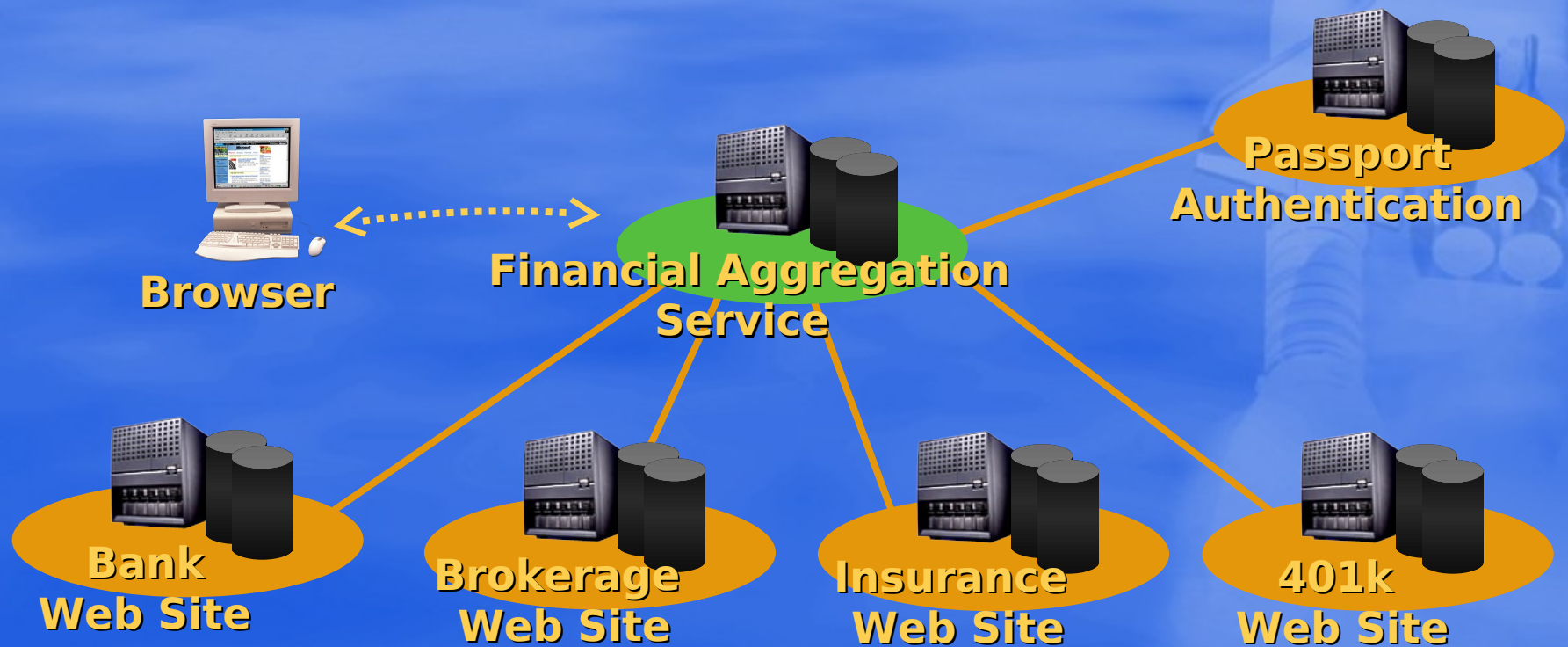
**Business:
Supply Chain**

Inventory, fulfillment,
purchase orders

**Developer:
Building
Blocks**

Calculate tax, credit
cards, authentication

Scenario: Web Service



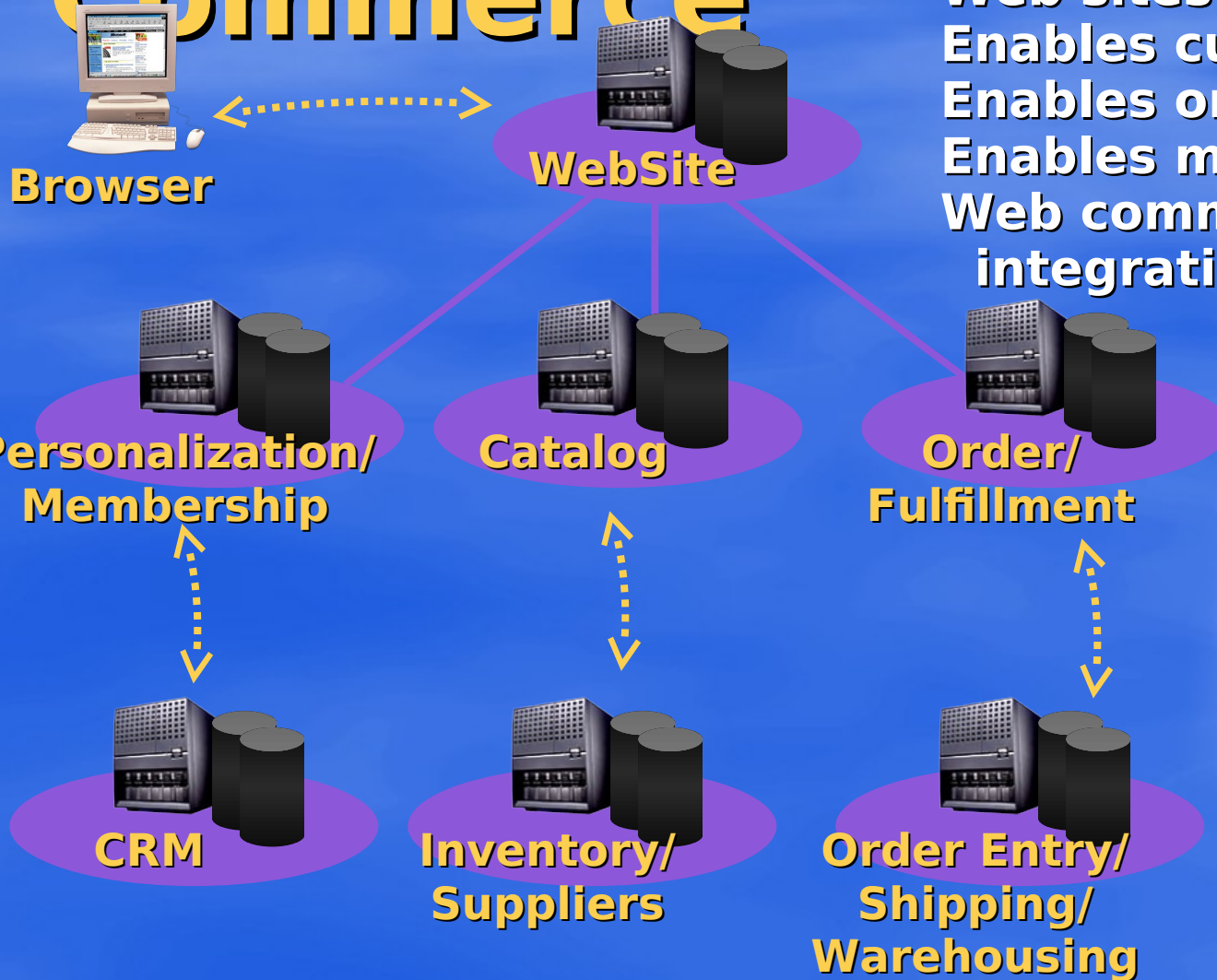
- enables service aggregation/composition
- enables service customization
- enables outsourcing
- enables integration in hosted environment
- enables “be everywhere” vs. single destination

Microsoft Platform Strategy

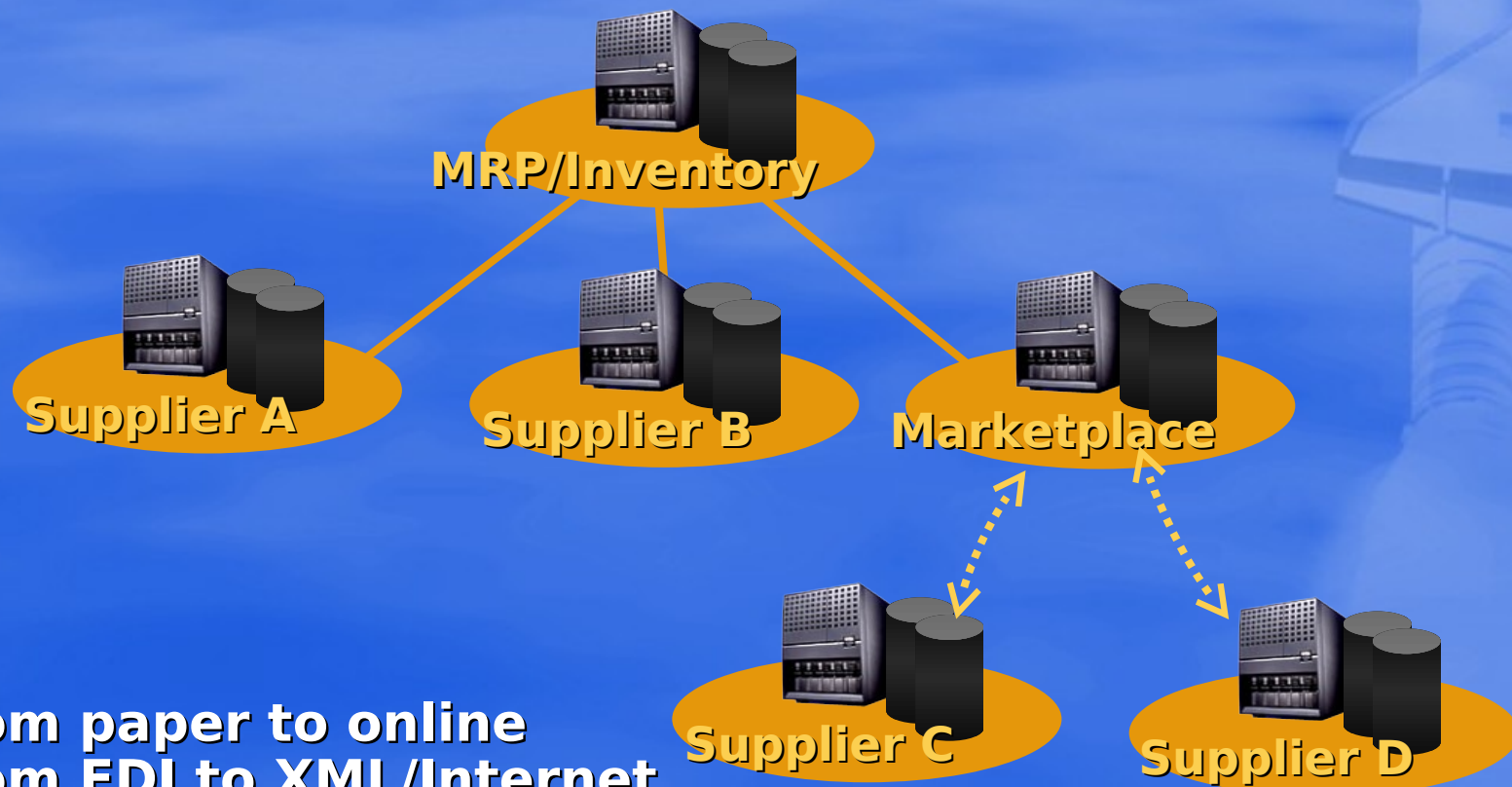
- **Platform exists at two levels**
 - **Still build great individual applications**
 - **Now build “systems of applications” via loosely-coupled, message-oriented, XML approach**
- **Integration is the sweet spot**
 - **The fundamental problem for both enterprises and dot coms**
 - **Builds on XML and software leadership**
 - **It is the essence of Web Services**

Scenario: Web Commerce

Web sites grow backwards
Enables customer self-service
Enables online order tracking
Enables more personalization
Web commerce driving integration imperative



Scenario: Supply Chain



from paper to online
from EDI to XML/Internet
from forecasted manufacturing to build to order
from batch to real-time
from static to dynamic relationships
enables inventory-less retail and supply chains
enables ad hoc marketplaces
enables capacity auctions

Windows DNA Web Application Platform

Client Tier

Browser

Rich Client

Devices

Application Logic Tier

Application Services

ASP/COM+
Application

IIS/ASP, COM+/MTS, MSMQ,
ADO/OLE DB Data Access,
Active Directory, XML,
Commerce

Data Tier

Data Access and
Storage

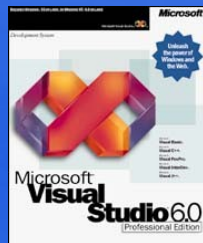
Legacy Host

SQL Server

Other Database

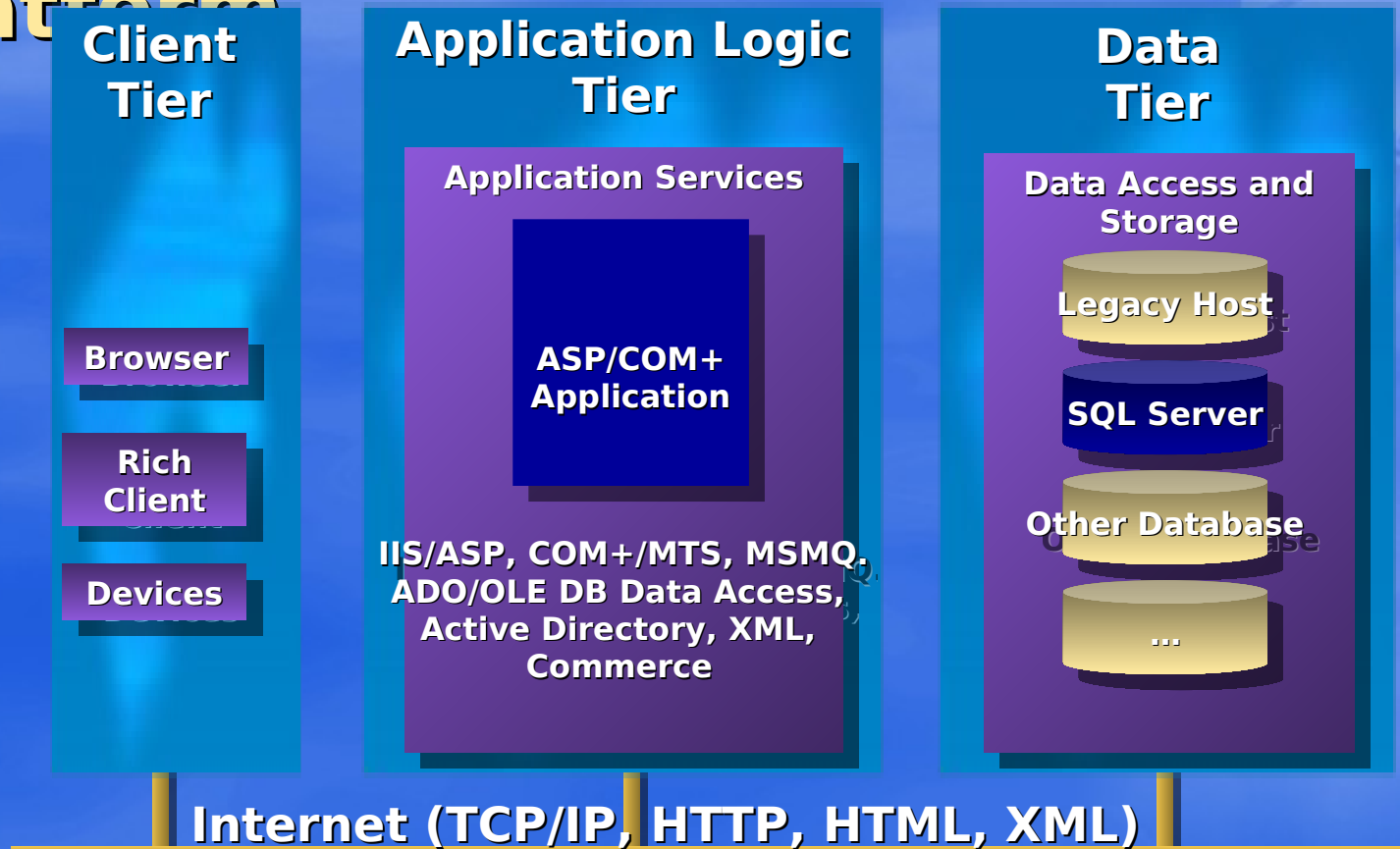
...

Internet (TCP/IP, HTTP, HTML, XML)



Windows DNA 2000

Next Generation Web Application Platform



Microsoft
SQL Server 2000
Server2000

Microsoft
Application Center 2000



Microsoft
Commerce Server 2000

Microsoft
Host Integration Server 2000

Microsoft
BizTalk Server 2000

Windows DNA 2000

The First Web Services Platform

Stronger
Customer
Connectio
n



Next
Generation
Internet User
Experience



New Device
Form Factors

Client
Tier

Business Logic
Tier

Data
Tier

Firewall



Trading
Partner

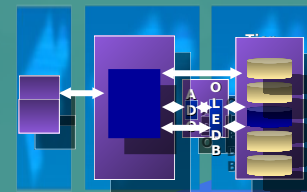
Integration/
B2B



Megaservices

XML Backbone

Application
Integration



Windows DNA Customer Adoption

Windows
DNA
Share

B2B e*markets: 61%
(Goldman Sachs)

**Top 50
Shopping: 52%**
(Media Metrix)

**Secure
Sites: 43%**
(Netcraft)

**Internet
Overall: 25%**
(Netcraft)

**Software
Value Add**

Customer Adoption

800.com	Broadcast.com	ESPN	Kelly Blue Book	Panasonic	Starbucks
800flowers.com	Buy.com	Etera	KnowX.com	ParsonsTech.com	StockPoint.com
Ace Hardware	CarPoint.com	Experia	Launch.com	PC Flowers & Gifts	StreetAdvisor.com
activate.net	CBS/MarketWatch	FamilyEducation.com	Levi Strauss	PC Mall	Switchboard.com
AlaskaAir.com	CBS/Sportsline	FashionWindows.Com	Lifeminders.com	PersonalLogic.com	TD Waterhouse
Albertson's	CDW.com	Fool.com	Listing.com	Pioneer Electronics	The Bombay Company
AllAdvantage.com	CityPages.com	Forbes	Martha Stewart	Pitney Bowes	TheKnot.com
Americawest.com	Click2Send	Ford.com	Mary Kay	Pivot	ThirdVoice.com
Ancestry.com	Colorado Rockies	FreeMe.com	McAfee.com	PlanetDirect.com	Thrive
AnyDay.com, Inc.	CommerceOne	Freeserve.co.uk	Merrill Lynch	Point.com	Ticketmaster
AP.org	Compaq.com	Freeshop	MicroWarehouse	Priceline	Time Warner Commerce
Archipelago	CompUSA.com	Fusive.com	Mindbridge.com	Pricewatch.com	Tower Records
Art.com	CompUSANET.com	Gap.com	Moai	ProLaunch.com	toysmart.com
AskJeeves	CompuServe.com	Gateway.com	Monster.com	QPass	Tunes.com
AtYourOffice.com	ConsumerInfo	Gear.com	mothernature.com	QuiltCollector.com	Tutor.com, Inc.
auctionrover.com	continental.com	Globe	MSNBC.com	Quokka.com	TV Guide
AutoBytel.com	Conxion.com	Godiva	MTV	Quote.Com	ual.com
Autoweb.com	cooking.com	GreenfieldOnline.com	mysimon.com	QVC	UBID.com
AvenueA	CoolSavings.com	HarrisPollOnline.com	NAI.com	Radiowave.com	Uproar
Avertlabs.com	CoolTravelAssistant	Harvard Business School	Nascar.com	Realnames.com	UPS.com
BankRate Monitor	Costco.com	healthshop.com	Nasdaq.com	Realtor.com	Varsity Books
Barnes and Noble	CVS/Soma	Homeadvisor.com	NBA.com	Reciprocal	Vicinity.com
Best Buy	Dataquote.com	Homestead.com	NBC	Reel.com	Virtual Bank
BidCom.com	DBC	Homestore	Netmarket.com	Rolling Stone	Visio
biddersedge.com	Dell	Honeywell	Netzip.com	seeUthere.com	VitaminShoppe
BigCharts	Delphi.com	hotbot.com	Nextcard.com	Sharp	Vjungle.Com
BigFoot.com	DrKoop.com	ibaby	NFL.com	Shopping.com	Votation.com, Inc.
BioSpace.com	DrudgeReport.com	lfront	NFO-Interactive.com	ShopTLC.com	Warehouse.com
BizAutomation.com	Drugstore.com	Infospace	Nordstrom.com	Sidewalk.com	Web1000.com
Bloomberg	Electronic Boutique	Intel	Office Depot	SiteMeter.com	WebJump.com
boatscape.com	eCertain	Intellicast	oncore.com	SkyMall	Women.Com
BonusMail.com	eCustomers.com	iShip.com	OnlineOfficeSupplies	SmarterKids.com	Wrenthead.com
Bonzi	Eddie Bauer	iVillage	Onsale.com	Spiegel	WWF
Books24x7.com	ememories.com	Jfax	OpenSpace.com	Spree	Zagat
BravoGifts.com	eproject.com	John Deere - Homelite	Orchard	Staples	Zone.com

Scalability

Two Complementary Approaches to Scalability

Scale Up

Hardware approach

Expensive hardware

Cost increases w/
scale

Single point of failure

Server availability

Program one system

Manage one system

Scale Out

Software approach

High volume hardware

Cost linear w/ scale

No single point of failure

Service availability

Program multiple systems

Manage multiple systems

Hardware
scale up
via bigger
individual
servers

Software scale out via
“farms” of servers



+



+

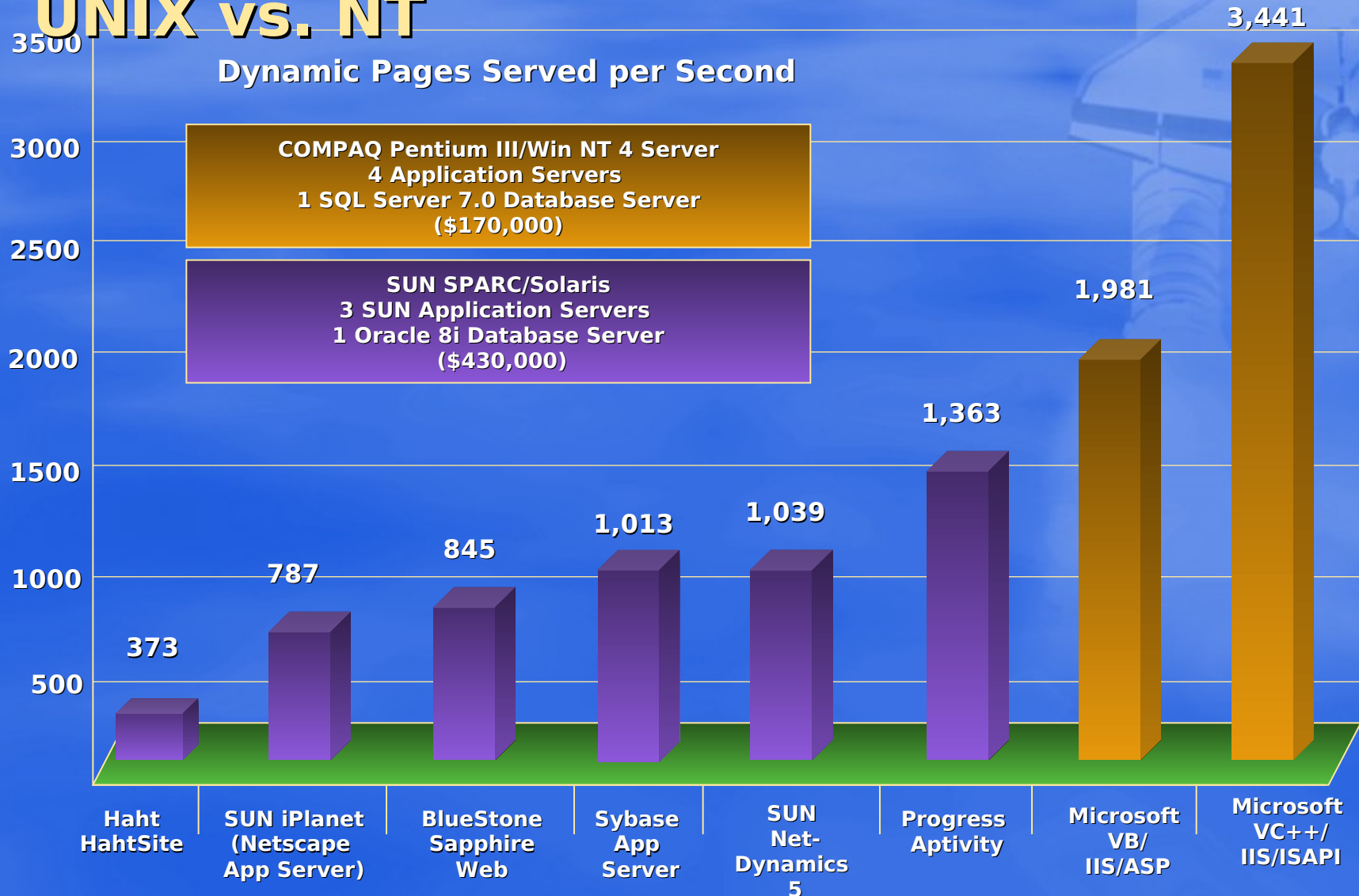


+

...

Scalability

Web Application Server Performance: UNIX vs. NT



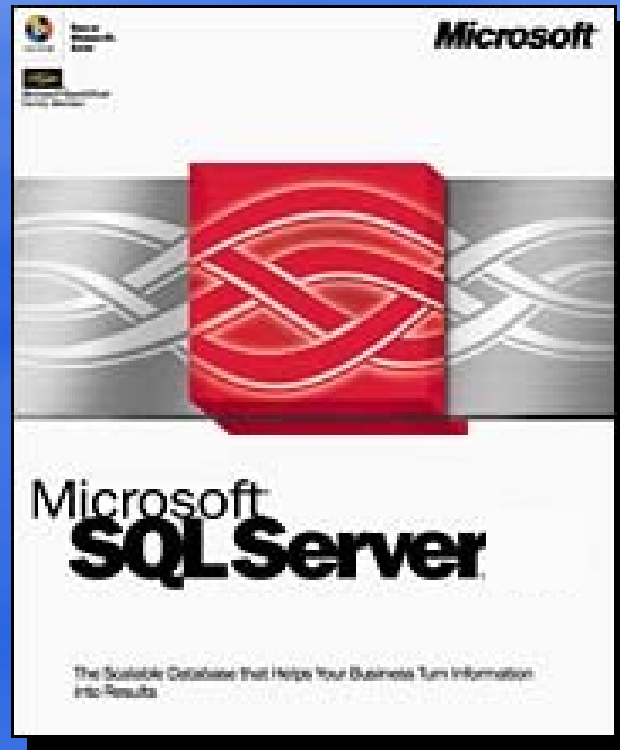
Source: DocuLabs/ZDLabs App Server Shootout 7/99

Windows 2000

Built-in Web Application Server

- **Integrated Windows DNA Application Services**
 - **Internet Information Server 5.0**
 - **Active Server Pages**
 - **COM+ component services**
 - **Transactions**
 - **Message Queuing**
 - **Role-based security**
 - **Network Load Balancing**
 - **Active Directory**
 - **High performance XML support**

SQL Server 2000



Application Center 2000

- Software scale-out made easy
- Simplified application management
- Mission critical availability



Application Center 2000 Demonstration

**Bob Pulliam
Technical Product Manager
Application Server Marketing**

Host Integration Server 2000

- **“One stop shop” for legacy interoperability**
 - **Networks - SNA, NetWare**
 - **Data - DB2, Oracle, Sybase, UNISYS**
 - **Applications - CICS, IMS, MQSeries**
- **Bi-directional integration**
- **Zero footprint on the host**
- **Replaces SNA Server product**

Exchange Server 2000

- **Enhanced Messaging and Collaboration Platform**
 - Integration with Windows 2000
 - Multiple database support
 - High performance Internet integration
- **Web Store Collaboration and Applications**
 - Integration with Office 2000
 - Advanced store for mail, documents, web
 - Supports native Web applications
- **Anytime, Anywhere Communication**
 - Enhanced access from the Web
 - Voice, Data, Video Conferencing
 - Unified and Instant messaging

Commerce Server 2000

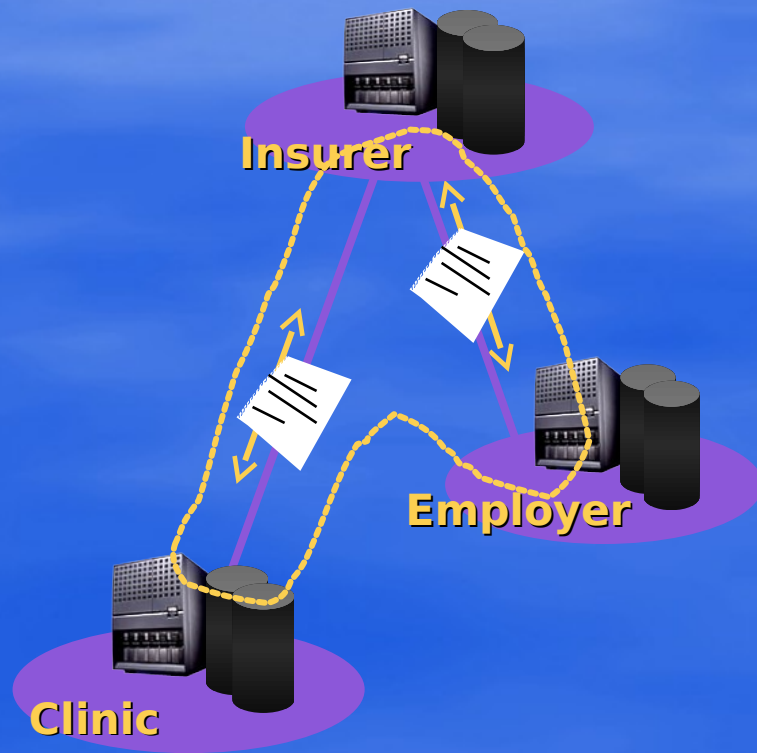
- **Support key e-commerce scenarios**
 - Transaction Pipelines
 - User Profile System
 - Content Targeting System
 - Product Catalog
 - Data Warehousing and Analysis
- **Increase developer productivity/decrease TTM**
 - Rapid site deployment using Solution Sites
 - Pre-defined objects and services that map well to e-commerce business entities and processes
- **Improve site management**
 - BizDesk: central console for managing all

BizTalk™

Business Process Integration

- **Build solutions that span multiple applications and/or companies**
- **Architecture**
 - **Loosely-coupled, message-oriented model**
 - **Standard protocols and formats**
 - XML messages
 - Any transport including http, ftp, smtp...
 - **Smart adapters for data transformation**
 - **Platform and language independent**
- **BizTalk Framework 1.0 available**

BizTalk Example



***Three Companies,
One "Solution"***

Key Benefits

- Leverages Internet infrastructure
- Supports all levels of integration - B2C, B2B, A2A
- Spans existing and new systems
- Enables rapid development and adaptation

www.BizTalk.O

- **BizTalk Framework**
- **World's largest XML schema library**
- **Creators: register schemas and track use**
- **Consumers: schema discovery and reuse**



BizTalk.Org Steering Committee

American Petroleum Institute

Intellysis

Ariba

I2

Baan

JD Edwards

BP/Amoco

Merrill Lynch

Boeing

Microsoft

Clarus

Open Applications Group

CommerceOne

Pivotal

Compaq

RosettaNet

Concur

SAP

Dell

Siebel Systems

DISA

UPS

Microsoft BizTalk - Today

- **BizTalk JumpStart Kit 2.0 - available now**
 - **SDK enables BizTalk application development today**
 - **Download at Microsoft.com/BizTalk**
- **BizTalk Server 2000 Tech Preview - April**
- **BizTalk Server 2000 - available this year**
 - **Industrial strength plumbing**
 - **Interchange management**
 - **Document transformation**
 - **Smart adapters - EDI, SAP, etc**

Partner With Us

- **End to end Platform Opportunity**
- **End to end Business Opportunity**
- **Doubling down our investments with developers and partners**

POWER

UP



Microsoft®